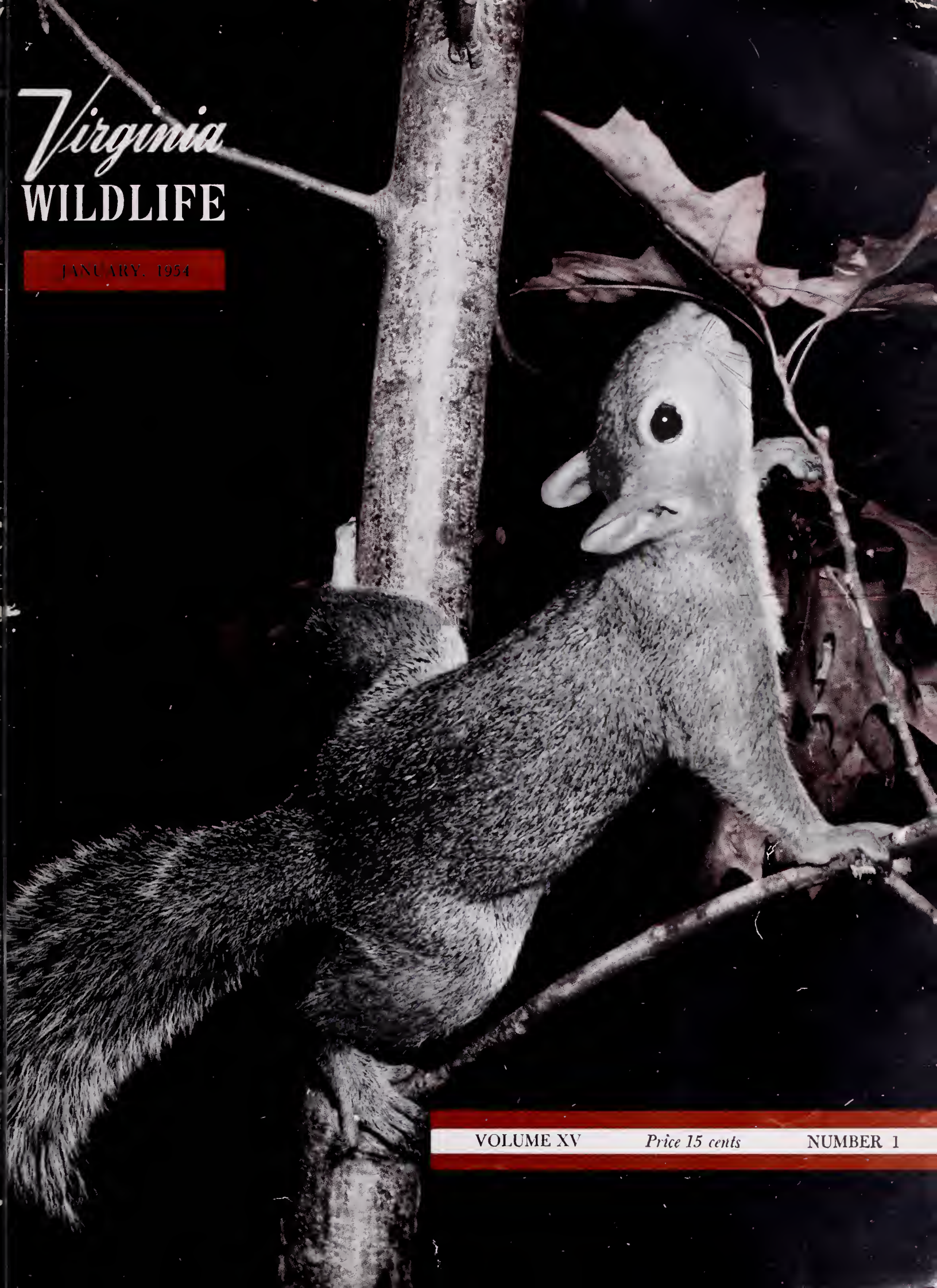


# *Virginia* WILDLIFE

JANUARY, 1954




VOLUME XV

*Price 15 cents*

NUMBER 1





O Winter! ruler of the inverted year.  
Thy scatter'd hair with leet-like ashes fill'd,  
Thy breath congeal'd upon thy lips, thy cheeks  
Fring'd with a beard made white with other snows  
Than those of age; thy forehead wrapt in clouds,  
A leafless branch thy sceptre, and thy throne  
A sliding car indelited to no wheels,  
But urged by storms along its slippery way;  
I love thee, all unlovely as thou seem'st,  
And dreaded as thou art.

—Cowper.



# Virginia WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia  
*A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and  
Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia*

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VOLUME XV JANUARY, 1954 No. 1

## *In This Issue*

	PAGE
Editorial .....	4
How to Create Better Working Relationships between Conservation Officers and the Courts ....	5
Small Marsh Management Possibilities in Virginia .....	8
The Management of Man .....	10
Conservationgram .....	13
The Raccoon in Southwest Virginia .....	16
The "Mystery" Bass of the Chickahominy .....	18
What is Snow? .....	19
How to Prepare a Deer Trophy for Mounting .....	20
Field Force Notes .....	22
Drumming Log .....	24
Mast .....	26
Big Game Trophy Contest .....	27

## *Cover*

The gray squirrel, leading all other game animals in number shot at and killed in the United States, followed closely by the cottontail rabbit, comes into his own in Virginia this month, as hunters put aside buckshot they used for deer and go after small game.

(Commission photo by Kesteloo)

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## For a Cause . . . . . and Dedicated Service

**I**T IS Sunday afternoon in early November in Suffolk, Virginia. The corridor of the Louise Obici Hospital is filled with anxious visitors. Outside of Room 413 a beautiful array of colorful fall flowers—roses, asters, chrysanthemums, carnations—suggests that a friend with many friends is seriously hurt. We dare not step inside. The nurse has just come out and shakes her head gently, saying it is best for us to remain outside while the patient rests.

The day moves on; more flowers arrive; more people. Anxiety mounts. Men weep.

Who is the sick man? Is he state senator? Town mayor? A philanthropist? Is he some noble executive? No. The injured patient is only a plain servant of the people, a man of service to his state, and, to his fellow townsmen. He's the well-liked, good-natured county game warden of Nansemond County.

The warden has been shot. His left arm is in a bad way. It's going to be a fight to save it. There's been much pain, loss of blood. Sleep lies heavy. There's a murmur in the hallway. More friends come. "Oh, God," one says softly, "if they can only save the boy's arm."

A visitor comes in from Richmond. It's the boss himself, I. T. Quinn, the Game Commission's executive director. "May I see him?" he asks the nurse, "it's quite important."

The nurse takes him in. The warden talks feebly. The arm below the elbow is a jellied mass of dark flesh and blood, loosely wrapped in gauze. "Guess I'm lucky, Boss," he says, "that tree saved me. But I sent a slug after him as he ran off."

Monday comes; then Tuesday. Specialists arrive from Norfolk. The arm is in a bad way. There's no circu-

lation. Something's got to be done—or gangrene. They operate. "Only a bare possibility to save it," one says later.

The warden is still young. He's the handsome picture of a man with an easy-going manner and a ready smile. When he was police officer in Suffolk, people loved him, worshipped him. As county game warden his popularity remained; in fact, it increased with hosts of townsfolk and members of local gun clubs. He arrested people—not too many but just enough to make everyone conscious of the game and fish laws.

The Nansemond warden is but one warden. He has a deputy assistant, S. B. Snead, and they both cover the county enforcing fish and game regulations and some few folks need to be reminded that it is stealing and criminal to break the law. There are other counties and other wardens and our wounded officer typifies the very best of them. Devoted servants of the people, that's what. Devoted to the ideals of conservation and the brotherhood of man, risking their lives so that others may have something legal to hunt, to fish.

Catching a squirrel poacher who turned on him with 'intent to kill' was routine work to Shelton Rountree, but it was highly commendable service to citizens of the Commonwealth. Service above self was his motto. So is it with the 134 other wardens and conservation officers whose job is to guard your wildlife—and God alone their guardian.

Shelton has lost his good left arm but he has gained in stature as a man dedicated to the cause of conservation and high public service. He has lost an important limb of his body, but he has gained for his fellow officers and the Commonwealth a new sense of regard and dignity.

—J. J. S.

EDITOR'S NOTE: It is not the practice of Virginia Wildlife to carry personalized editorials. In this case, however, the situation is such that we feel something more than news is justified.

Shelton Rountree was fired upon twice by an unknown squirrel hunter at dusk on November 7 and seriously wounded. S. B. Snead, his deputy, came to his rescue and rushed him to a Suffolk hospital. A reward of \$1200 has been put up leading to the arrest and conviction of the squirrel poacher and "would-be killer."





The dignity of our courts of law has come about through long years of tradition and will always be uppermost in the minds of jurists throughout the land. (L. to R.) James Du Val, deputy clerk, Judge Harold Maurice, and Clerk Milton Matthews, all of Richmond City Police Court.

## *How to create better working relationships between* **Conservation Officers and the Courts\***

By WEBB MIDYETTE  
*Chief, Law Enforcement Division*

(Commission photos by Kesteloo)

**E**VERY COURT of law demands one thing from every peace officer and that is dignity. This dignity has come about through long years of tradition and will always be uppermost in the minds of jurists throughout the land. To violate this dignity is to violate the ethics of the courts, and thereafter the law enforcement officer will fight a losing battle in the courts of law.

In the term "dignity", I do not mean any false mannerism or special type of behavior, but rather a firmness, impartialness and neatness affirming that dignity. The law enforcement officer must at all times make his appearance in court one of esteem and formality, not in the manner of one who has to do a job whether he likes it or not. He must present a neat appearance, be orderly, confident. He must be fair and impartial, in order that the court may weigh the evidence without fear of embarrassment in the conviction of the violator or suffering from any doubts concerning his guilt.

In my 26 years experience as a conservation officer, district supervisor and law enforcement chief, it is found that the court too often lacks confidence in the officer. This lack of confidence can come from many things, but uppermost perhaps is the fact that the officer himself lacked the dignity required by all courts of law. It is imperative that the court and the officer handle every case in a dignified manner, be in complete accord and have complete confidence in their common cause.

While we must assume that the court will have already established the dignity required for its part, there are some requirements by which the conservation officer must govern himself in order that he may establish the dignity required of him.

The dignity will come with a thorough knowledge of the laws which the conservation officer has been delegated to defend. He must be in complete accord with their application, or else he will never convince the court that the accused should be convicted.

We cannot establish a confidence in the courts about something in which we do not have confidence. The first requisite for gaining the confidence of the courts is confidence in ourselves and what we stand for and in what we are chosen to protect. We must be sold

\* Talk presented at Chattanooga, Tennessee last October to the law enforcement section of the Southeastern Association of Game & Fish Commissioners, of which Mr. Midyette was named chairman.



The warden must present the facts only, but in as complete a manner as it is possible to present them. John Bullock, bailiff, poses as defendant.

on what we are selling. We are selling the conservation of natural resources—the privilege of hunting and fishing and all associated endeavors. It is our job to see that these resources are not violated and that no one steals from his neighbor by violating these laws.

In my experience and observation I have found that many times cases are not brought to court in full confidence of guilt on the part of the officer. He may say to the court “I caught this man hunting.” But the court wants to know the how, when, what, and where of the violation. They want no pussy-footing around.

The courts want the facts, nothing more. But the facts must be as complete as it is possible to present them. It is on these facts, this on the spot review of the violation, that the judge will bring in his verdict. Present your evidence in an impartial, dignified and formal manner, regardless of whether the judge is a lifelong friend or a new acquaintance. Such actions will not only gain respect for the warden, but will likewise create a respect for the law in the minds of the defendant and those present at the hearing. Always keep in mind that the judge has only your word upon which he must justify his decision of guilty or not guilty. You are a law enforcement officer and you present the facts as you see them. The truth needs no defense, but unless it is clearly and completely brought out, violators will continue to hide behind halftruths and alibis.

Hunting and fishing are no longer a means of putting food on the table, as they were some 40 or 50 years ago and longer. Today, these sports are big business. But some of our courts of law still cling to that tradition of man's right to fish or fowl at his discretion. They have not advanced in their thinking as quickly with

the game laws as they have in other phases of crime. They are generally interested in wildlife, but somehow they just don't seem to get quite as upset when a man kills a deer out of season as they do when that same man accidentally kills domestic animals in the pursuit of game. Yet, many times the replacement value of the deer is much higher than for other animals.

This apathy will take time to overcome, but it can be done. Locally, the solution lies with the conservation officer himself. The officer's duty is to protect the resources and arrest the violator, not to convict. So don't be discouraged when you feel the judge has been too lenient with the accused. Keep bringing them in, presenting your facts to the best of your knowledge in an honest, impartial manner. Stand your ground, but without malice. Always be a gentleman, no matter how wrong you may feel the judge to be. In time, you will gain the respect of the court for you and for what you stand. Believe in what you do, what you are, and you will soon have the courts believing that way too.

Game and fish violations come under the criminal code; present your case as such. Sell yourself to the courts, and at the same time you will be selling what you stand for. Know the laws you are delegated to protect, believe in them, carry them out, and eventually the day will come when we shall have beaten down the “sporting admiration” that some individuals and some courts, too, have for those that outsmart the law, as was the case in prohibition.

The conservation officer must be alert to convince the court that the law is to set an example. He should never let the accused outwit him, nor cause the court embarrassment by arresting without sufficient evidence to convict. Such things set back the game and fish laws where they were years and years ago. We have so often heard it said about the accused “he really is not such a bad fellow.” Yet the officer must show the courts that the accused was just that, or else he wouldn't have been arrested.

The law enforcement officer must at all times make his appearance in court one of esteem and formality; always neat, orderly, confident.





Under the laws of our government wild game, wild birds and other wild animals belong to the people; they are common in law. The United States Supreme Court in 1896 ruled in the case of *Martin v. Maddill* (I quote in part) :

*"Whilst the fundamental principles upon which the common property in game rests, have undergone no change, the development of free institutions has led to the recognition of the fact that the power or control lodged in the state, resulting from this common ownership, is to be exercised like all other powers of government as a trust for the benefit of all the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from public good."*

Therefore, for the purpose of exercising this power, the state represents the people, and the ownership is that of the people in their united sovereignty.

The success of any law depends upon the fidelity and sincerity of those of us who enforce it, or cause it to be enforced.

The conservation officer should not develop the attitude of "playing hide and seek or if you don't watch out the goblins will get you", but he must have the accused and the courts realize that any violation of the game and fish laws is against the dignity of man, for it is a crime against the people, not against the individual.

Conservation officers are every bit as needed as the various arms of military service to guard our inalienable rights, the people's property, our wildlife natural resources. In other words they protect the rights of people to enjoy their God-given rights and privileges, and that they may have it more abundantly. The public and courts must regard him as an investment in decency and sportsmanship.

To my way of thinking, the conservation officer's relationship to the public and to our courts is as the door is to the house—it can let us in or keep us out.

Conservation officers are public servants and should so conduct themselves and show the courts that they will discharge their obligations, and the public investment as a sacred trust, which, if done, will make for the law more respect and more law-abiding citizens. If we do this with full responsibility, the law will be more impelling and inescapable.

The courts expect and rightfully demand truthfulness. If we have that, we will be fair, straightforward and assuring. The conservation officer should never oppress the innocent and should give to the guilty their fundamental constitutional rights; then the courts of justice will soon lean upon the strong arm of such character. He represents the majesty of the laws of conservation. He should be courageous, but not a bully, ever devoted to duty and not natural physical prowess; always the symbol of authority, by way of peace and dignity of the state—it is his to protect and represent. Be always sure of the guilt of the accused. Be sure, impartial, showing neither favor nor favoritism.

The conservation officer should keep the court confident and sympathetic toward the law, through courage and full knowledge, with a determination to meet the task, not ashamed, nor afraid; always establishing confidence in himself and through the court.

The officer should be sure, neat in appearance, his head high and his conduct beyond reproach, especially in the courts. All of his relationships with the courts should be with full knowledge, dispatch, courtesy and confidence. He should present his case in a clear, active and informative way.

(Continued on page 21)

The officer's duty is to protect the resources and arrest the violator, not to convict, so he should not become discouraged when he feels the judge to be too lenient. He should stand his ground but without malice.



# Small Marsh Management Possibilities In Virginia

By C. P. GILCHRIST, JR.  
*District Game Technician*

**E**ACH year many marsh owners and duck hunters in Virginia wonder what they can do to increase the numbers of ducks using their marshes and ponds. Their first and most natural thought is that if they could use corn they could get ducks on their areas, but that is illegal so the next best thing to do is to plant their areas with duck food. They are generally correct in their thinking up to a certain point. Though most of their areas are lacking in duck food in sufficient quantity to attract any number of ducks, just promiscuously planted duck food will not solve the problem.

For the most successful marsh management it is necessary to be able to control the water level of the area, whether the area be large or small. This discussion will be limited to small marsh and pond management, but the same principles apply to large areas. It is practically impossible to introduce a species of plant successfully into an already mature aquatic habitat of undesirable plants without first changing the physical conditions of the area. This change can be most successfully brought about by a water level manipulation.

As in any business or operation the first thing to be done is to take stock of what you have on hand and what you must contend with. To do this the following steps should be followed. (1) Find out what plants are present on the area. (2) Determine the depth, chemical nature and clarity of the water; type of bottom, its softness, hardness and contour. (3) Find out the source and type of water supply. (4) Determine the amount of diking necessary to control the water on the area. These four basic steps are necessary before it can be decided what is the best type of management to



be used on the area and what plants will be most suitable. These services are available from the Virginia Commission of Game and Inland Fisheries, who have technicians trained for this purpose.

After the initial survey has been made the next step is to control the water on the area. Regardless of the type of area being impounded, salt, brackish or fresh water, special emphasis should be placed on the type of water control structure installed in the dike. This structure should be installed in such a manner that the pond can be flooded or drained at will. There are several satisfactory types of structures, two of which are the stop-log gate and the flap gate type. The stop-log type must be manually operated where the flap gate type is automatic once it is set to drain or flood the area. The stop-log gate is most satisfactory where there is no tide present and the flap gate is best suited where tide water is present.

The stop-log gate is constructed so that the water level can be raised or lowered by adding or removing horizontal boards in the spillway box. This type of spillway is very often used in fish ponds.

The flap gate control structure used under tide water conditions is as follows. A metal or concrete culvert is placed through the dike level or slightly below the bottom elevation of the pond. To each end of the culvert a metal flap gate is attached. This gate has a metal frame that is attached to the side of the culvert with a hinged metal flap that is set so that it fits over the opening of the pipe. Under tide conditions this gate is operated as follows: when draining the pond the flap gate on the inside of the pond is raised and when the water on the inside of the pond is higher than on



the outside the gate on the outside opens automatically and allows the water to drain out. When the tide water on the outside is higher than the water on the inside of the pond, the pressure of this water closes the outside flap gate and prevents the tide water from entering the pond. To fill the pond the procedure is reversed, with the opening of the gate on the outside of the pond, and allowing the gate on the inside to swing free. This type of control structure is easy to install and is fairly reasonable in cost.

If the area to be impounded is full of undesirable emergent weeds and marsh grass, these should be eradicated before planting the area. This is done most easily by disking, if possible, and flooding the area for a sufficient time to kill these plants. After this has been done the pond is ready for planting.

If the type of management decided upon for the area is the drawdown system the following method of operation has been found to be very successful. Drain the pond as rapidly as possible in the spring and seed the bottom immediately while the soil is still very moist. In Virginia probably the best natural foods to seed are duck millet (*Echinochloa alteri*, *Echinochloa crusgalli*), and smartweeds (*Polygonum* spp.) Wild rice (*Oryza aquatica*) can be used, but its value in Virginia is somewhat doubtful. After the seed have sprouted, keep the soil well moistened by flooding periodically with an inch or two of water for a day or two at a time if there is insufficient rainfall. After the plants have matured and the seed ripened in the fall, flood the area with six to 18 inches of water so the ducks can feed on the seeds. The following spring, after the weather has become

For the most successful marsh and pond management it is necessary to be able to control the water level on the area, whether the area be large or small.

(S. C. S. photo)



warm, drain the pond and expose the bottom to the air. There should be enough seed left by the ducks to reseed the area and make further plantings unnecessary.

If the drawdown system of management is impractical and a permanent water-level type of management is desired the following procedure has been found very successful. Eradicate the undesirable weeds and marsh plants that were present prior to making the impoundment. Allow sufficient time for these plants to decompose and the water in the pond to clear up and lose its stain from the decaying organic matter. The best method of planting aquatics is by using the vegetative portions of the plants or tubers. Plant them singly or in clumps throughout the pond. Most of them will spread very rapidly if growing conditions are suitable so one plant every three square feet is sufficient density for planting. Some of the common aquatics found in Virginia that are suitable for planting are Sago pondweed (*Potamogeton pectinatus*), clasping pondweed (*Potamogeton perfoliatus*), wild cherry (*Vallisneria spirallis*), wigeon grass (*Ruppia maritima*), and eel grass (*Uostera marina*). Some of these plants require fresh situations and others require brackish or saline conditions.

The question that often arises with a marsh owner is, "Where will I get the planting material to plant my pond?" There are aquatic nurseries in different sections of the country that have the necessary plants for sale. Even though plants are available from these nurseries it is best if marsh owners secure their plants from local sources where the conditions are as near like the area to be planted as possible. There are excellent stands of native duck food plants in the public waters of Virginia where any interested marsh owner can secure enough planting material to plant his area and he will stand a better chance of success by using these native plants than ones from another part of the country where water, soil, and weather conditions are different from those in Virginia.

If marsh owners will look around their marshes closely, they will probably find areas that can be diked at a low cost and make it possible to increase the number of ducks using their marsh. However, if there are no areas on your marsh suitable for diking, sometimes an area can be improved temporarily by the use of herbicides, cutting marsh vegetation, disking and burning. These devices open up the predominant vegetation temporarily and will often allow more desirable plants the opportunity to come in on an area.

Remember that regardless of what kind of management you plan to use on your marsh, first stop and do the following things to make sure you are utilizing your marsh to the best advantage. (1) Find out what plants you already have on the area. (2) Determine the physical and chemical nature of the soil and water. (3) Know your water supply. (4) Determine the cost of the development. If you remember these four basic rules and follow them you will stand a better chance of getting your money's worth for your undertaking.



# "The Management of Man"\*

*Biologists once dreamed of solving wildlife problems while the galleries cheered. Wiser now, they see need for "human engineering" as well as better research.*

By FRANK H. KING

**T**HE MANAGEMENT of Man" was used first as the title of the main address by H. Albert Hochbaum, Delta Waterfowl Research station, at the Ninth Midwest Wildlife conference at Purdue university in December 1947.

It might be used well also as the main theme for much of the recent thinking and planning in the field of wildlife management, since it is becoming increasingly apparent that the knowledge and cooperation of the public is of fundamental importance in carrying out a well-rounded conservation program.

A year ago the Midwest Wildlife conference set aside one evening period for education and public relations discussions. This year an entire afternoon session was devoted to these topics. These meetings are indicative of the increased interest in conservation education, and of our recognition of the need for an expanded program in this field.

The last decade has seen a tremendous expansion in wildlife research and in the accumulation of data and techniques useful in the proper management of land for wildlife. Suddenly we seem to have raised our heads from our studies and looked about us, expecting to see the results of our experiments in wide use throughout the land, producing an abundance of game and fish. We can see but little—a few minor improvements resulting from the scattered efforts of a handful of people.

## Why Not More Speed?

Well! Have we been doing something wrong? This is the atomic age; certainly we can expect our program to move faster than that. We have been working hard at many wildlife problems and believed we had found some of the answers. Perhaps we had better take time out to look around a bit and see what's holding up progress.

We need not apologize if we seem dissatisfied with our present program. In dealing with something so vital and vulnerable as our natural resources it is only

proper that we be dissatisfied with anything short of the best plans and speediest progress in carrying them to completion. As workers in wildlife management, perhaps we had better start at home and see if our own house is in order.

Here's something for a start—and what a start it is—an article by Clarence Cottam, assistant director of the Fish and Wildlife Service, in the October 1947 issue of the *Journal of Wildlife Management*, entitled "Some Improvements Needed in Wildlife Research." Among other just criticisms of the wildlife research programs, several points in the article deal with the public relations angle of the work.

## Information, Please

We are told that the results of research rarely are translated into action, and if published at all are usually written in a jargon the public cannot understand. In Dr. Cottam's own words, we need "... better public appreciation of the importance of research as a founda-

We have come a long way in wildlife research, we have learned much, but the core of the problem lies in getting the public to go along with what we've learned.



\* Reprinted from Wisconsin Conservation Bulletin.





The basis of the whole conservation problem is man. Perhaps we must start with the development of nature appreciation in children, teaching them perception of conservation and to recognize the inter-relationships of all living things, including man.

tion for practical information and management. The results of technical research should be popularized."

P. A. Herbert, Michigan State college, brought out many of these same points in his paper given at the Ninth Midwest Wildlife conference. His subject, "The Failure of Wildlife Research from the Sportsman's Viewpoint," touched a sometimes sensitive spot among wildlife workers. He pointed out that whether the idea is justified or not, many sportsmen feel that wildlife research is progressing too slowly and is often impractical.

H. Albert Hochbaum, at the same conference, told us that we really know very little about waterfowl management after all, since the duck population has declined despite our work of recent years, and that what knowledge we do have is not being put to its best use.

In the face of all this, research has willingly admitted that its program is still young, that mistakes have been made, and that we do not know all the answers to game problems.

### **Buried Findings**

We have come up with some good results and have put our findings into the hands of the conservation administrators. What happened after that, we believed to be outside our province.

Suppose we ask the administrators why they don't always use our research results for practical management. Several men were asked this question at the Wildlife conference and they gave some of the reasons heard before, including "impractical work," and "not conclusive evidence."

But especially the administrators said that even though they may approve of a program themselves, the public often cannot understand our plans and is not ready for them. The administrators have many tough problems

and seldom are able to tackle more than one new program at a time.

### **Core of the Problem**

We see that research accepts some of the responsibility for the need of better wildlife management results, and that administration accepts some of the responsibility, but the real core of the trouble seems to be that *the public does not understand our program and so is not ready to adopt it*. And who is to accept the responsibility for that?

Perhaps we should shoulder some of the responsibility ourselves and try to do something about this gap in our present work. A research program on man himself! Why not? We are not sociologists, it is true, but we should, at least, be able to study man's relationship with our game management problems and the best methods of making known the facts of our program.

The objectives of wildlife training should be broadened, perhaps, to include more than just the training of a few technical men to manage wild animals as their professional work—broadened to include the teaching of appreciation and understanding of wildlife.

### **Conservation Education**

Our educators tell us of the urgent need to instruct teachers in matters of conservation so they can better teach the children—that we need to create a desire for nature subjects so they will be taught in response to a demand for them from the public and not merely because of a state law.

Perhaps the basis of the whole program is to start with the development of nature appreciation in children, teaching them perception of conservation in all its phases and to recognize the inter-relationships of *all* things in nature, including man. With such a background there would be no lack of supporters for future management programs.

Since wildlife management problems primarily involve manipulation of an animal's environment, the term "wildlife management" is practically synonymous with "land management." Therefore we need extension programs to reach adults in their daily work, especially those engaged in active use of the land.

### **The Farmer's Role**

Man's knowledge and machines have made him a powerful force in the use or misuse of the land, and if we attempt to change that use, we must first change the ideas of landowners to fit in with the best land-use practices. Cooperation with the Soil Conservation Service likely will be the best method of achieving this goal.

In the growing competition of agriculture, forestry and wildlife for use of the land, we must always recognize that making a living comes first. But we can also show that wildlife on farms can be made incidental rather than accidental.





(S. C. S. photo)

Man's knowledge and machines have made him a powerful force in the use and abuse of the land, and if we attempt to change that use, we must first change the ideas of landowners to fit in with the best land-use practices.

We must emphasize more than in the past the need of wildlife for a place to live. Regulations and hunting restrictions can only attempt to fit the harvest to the supply; it takes a suitable habitat to furnish sustained production of game.

To talk of education in combating misuse and destruction is easy enough, but only the actual *practical application* of sound conservation will be effective. This will be hard to carry out successfully and likely will need some system that will be of financial benefit to the private landowner.

### **Sportsmen's Attitudes**

To most sportsmen wildlife management means merely the production of something to shoot. At the present

undeveloped stage of wildlife management, this viewpoint perhaps has some justification; of all the people who benefit from game management, only those who harvest the game contribute largely to its support. Nevertheless harvesters of game must learn to think of more than just season dates and bag limits.

We all want to perpetuate the American idea of free wildlife and public hunting. However, we must recognize the tremendous increases in hunting pressure in recent years; study the effects of habitat destruction due to agricultural expansion; and learn of the basic biological principles that go into the making of a well-balanced wildlife program.

It would, perhaps, be well to become adjusted to the possibility of more restrictions on seasons and limits in the future and try to improve the quality of hunting rather than the quantity. Much can be said for appreciation of the "intangible" values in the out-of-doors—finding enjoyment in the study and observation of wildlife as well as shooting.

### **Pay-Off Possibilities**

We need game managers in the field to coordinate public programs with the private programs of sportsmen's groups and to gather and centralize data on the status of our wildlife for the best possible management and regulations.

We need constant publications reaching a large number of people, dispersing the *right* information in an instructive and appealing manner.

Our public supervisors and administrators must "educate to legislate."

Thus we see that this "Management of Man" idea can be a mighty important one. It includes us all: researchers, manager and administrator, legislator and the general public. This last group is perhaps the most important of all in determining the success of a sound conservation program.

A public wise in the fundamentals of conservation and aware of its values will demand the best of research and demand that administrator and legislator alike put the best knowledge into the best use for the greatest number of people.

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APARTMENTS WANTED. Why should an old hollow tree, alive or dead, take up space that might be producing valuable timber.

For a long time nobody knew. Then the answer came from Europe, where hand-planted town forests were a tradition. Woods with no underbrush or den trees began to be eaten alive by insects that devoured the leaves, beetles that chewed the wood, and mice that gnawed the roots. The problem was finally solved by putting birdhouses in the woods, whereupon owls obligingly moved in on the mice and various birds on the insects.

Some experts estimate that ten den trees per acre are none too many to provide apartment houses for a mixed population of raccoons, bats, opossums, flying squirrels, owls, and the woodpecker that digs holes for other birds to nest in.

—Carnegie Museum



# CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

FIELD TRIAL CHAMPION LOST. Distressing word from owner Arnold Kedy, 4402 West Grace Street, Richmond, Virginia, tells of the loss of "Prince Tornado", 7-year, white, black and tan English setter who disappeared on December 8th in Richmond. Prince Tornado won 22 field trials and performed with surpassing beauty in the Commission's film "Coveys and Singles." Mr. Kedy, who is also in the film, suffered a heart attack recently, had to dispose of his dogs, except Prince. Anyone seeing or recovering this famous dog will do Mr. Kedy a great service by contacting him.

HUNTERS HELP FIGHT FIRES. Hunters were very cooperative in preventing and assisting in the suppression of forest fires on the George Washington National Forest during the hunting season, according to Forest Supervisor A. H. Anderson. During the first five days of the season only nine fires, ranging in size from a spot to 150 acres occurred. Two of these fires were of incendiary origin while the other seven were attributable to hunters, either through abandonment of warming fires, smoking small game out of den trees or smoking. This small number of fires in a gross area of 1,661,664 acres protected by the George Washington National Forest is an excellent example of the cooperation shown by the hunters in being careful in smoking and use of warming fires. Supervisor Anderson went on to state that due to extreme conditions resulting from the drought, a large number of fires would have occurred if this cooperation had not been given. Mr. Anderson extended his personal thanks and those of the District Rangers to all those hunters who offered their services and assisted in suppressing the fires that occurred. In one instance hunters had the fire controlled before the arrival of the the National Forest Fire Warden Crew.

AUDUBON SCREEN TOURS AT CHARLOTTESVILLE. Mrs. Colgate W. Darden announces the securing of the Audubon Screen Tours for Charlottesville this winter by the Turkey Sag Bird Club. The lectures will be given in Maury Hall at the University of Virginia. Prices will be lower than usual, since the lectures are subsidized by the Turkey Sag Club. Lecturers and dates are as follows:  
February 15—Fran William Hall—"South to Siesta Land."  
March 24—Allan Cruickshank—"Below the Big Bend."

VIRGINIA PITTMAN-ROBERTSON PROGRESS. Included in Virginia's Pittman-Robertson Progress report for 1953 is a tabulation of planting materials distributed which included 828,000 shrub lespedeza plants, 4163 pounds of shrub lespedeza seed, 9997 pounds of milo maize seed and 29,954 pounds of wildlife mixture seed.

CONSERVATION YEAR FOR BOY SCOUTS. 1954 will be Conservation Year for the Boy Scouts. Emphasis of the Scout program will be on stimulating recognition of the need for adequate protection and wise management of our wildlife, water, soil, mineral, forest and grasslands resources. Chief Scout Executive Arthur A. Schuck is preparing a series of projects in conservation for use by the various Scout units. President Eisenhower, who is Honorary President of the Boy Scouts, has urged the importance of the program.

FISHING WITH BOW AND ARROW. According to the "Muskegon Sportsman," bow and arrow fishing for carp and other rough fish has become popular in southeastern Michigan. One marsh area supported about 1000 man days of this sort of fishing during a two-month period.





George Nall, of Covington, lets an arrow fly during an early morning warm up.



A small portion of the cars and tents of bow hunters using the camping area on the Refuge opening day.



Three youngsters from Staunton (L. to R.) James Hall, Harald Bennett and Maurice Elliott, camped on the Refuge from Sunday through Wednesday hoping to drop a deer.



Whether stalking or still hunting, bow hunters are ready for action.

George Nall

## BIG LIFE

Snow mottled fields and dampen the spirits of bow hunters. This type of game in Virginia is a week-long hunt.

Hunters from Pennsylvania and Virginia joined in the hunt for the entire week.

While only one deer was killed, the enthusiasm displayed by bow hunters was evident.

Bill Hamilton, left, from Clintwood, Virginia, discusses chances of getting a deer with Bab Bawers, associate editor of VIRGINIA WILDLIFE.

Dan Feltz, secretary







ing, the bow hunters kept constantly on the alert and bows and  
body in the event they chanced upon a deer.

*Washington National Forest*

## LEVELS BOW HUNT

and forests, topped with few actual kills, failed to  
me 200 bow hunters when they went after every  
except turkey last November on the Big Levels

sylvania, New Jersey, West Virginia and all points  
hunt, with most of them camping on the area for

and one rabbit were known to have been killed by  
all be back next year for another try, if the en-  
em was any indication of a truly great sport.

, second from right, U. S. Forest Service game warden, accepts a cup  
of coffee from hunters after day's hunt.



(U. S. F. S. photo)

John Webb displays the only deer killed during the bow hunt. He  
killed it from a tree perch where he had waited nearly 12 hours  
for one to come along.

Talking it over. (L. to R.) Jim Oglethorpe, president of the Bow  
Hunter's Association in Norfolk, Forest Supervisor A. H. Anderson,  
Thomos G. (Uncle Tom) Herring, Game Commissioner from Dayton,  
Bob Bowers, Stuart P. Dovey, deer studies leader, an unidentified  
bow hunter.





# The Raccoon In Southwestern Virginia\*

By WILLIAM C. KELLNER  
*Special Services Officer*



(Photo by Gordon Brown)

MUCH has been written in the last decade about the raccoon, and popular literature is filled with accounts of its savage fighting ability. It is generally agreed among coon hunters that pound for pound an angry raccoon is a match for most dogs. Split ears and slashed noses of many old coon hounds examined bear proof to the tales told by their masters.

The density of raccoon populations in various regions of Virginia varies greatly. East of the Blue Ridge Mountains, especially in the Coastal Plain, the animals are plentiful. Repeated reports of raccoon destruction of corn and poultry and predation on young muskrats in houses and pelt damage to muskrats in traps are received from eastern Virginia. There is little question but that the raccoon in sections of eastern Virginia is so abundant that it is a nuisance.

West of the Blue Ridge Mountains this picture of abundance changes, and the raccoon is comparatively scarce. In some sections of western Virginia the animal is rare, or does not exist at all. However, in recent years a noticeable increase has been noted in the raccoon population in most of southwest Virginia. This upward trend has been slight in some counties and more marked in others. Both the county game wardens, and the resident hunters agree that there has been an increase. For example, L. E. Styne, game warden of Botetourt County, reports that in 1952, for the first time in 22 years, he has received complaints of raccoon damage in his county.

A raccoon investigation was formulated to determine the factors influencing the raccoon and its management in southwestern Virginia. The investigation included food, den sites, habitats, parasites, diseases, and others. The influence of hunting upon raccoon populations was

included, and the possible effects of various hunting regulations upon the population was an important management consideration. The determination of survival of native raccoon was also an important consideration in this investigation.

Since 1938 the Virginia Commission of Game and Inland Fisheries has been operating a limited raccoon restocking program. From a modest beginning of six animals released the first year, the program has expanded to such an extent that in the fiscal year ending July 31, 1950, 676 raccoons were released, through the Commission's efforts, in 17 counties in southwest Virginia. This study was designed to determine the value, if any, of these stocked animals toward seeding areas that have no raccoons, in increasing the production by adding brood stock to areas of low population.

## Food Habits

Food habit determinations may be made by stomach and intestinal analysis or by droppings examination. As there is no raccoon hunting or trapping season in Virginia during spring and summer months, droppings offer the only practicable method of obtaining a reasonable number of samples from which to secure information on the food habits of the raccoon during this period.

A limited food habit study was conducted in southwest Virginia on three study areas, primarily to find whether food supply was the limiting factor. The omnivorous raccoon will consume almost anything edible that is relatively fresh. In southwest Virginia a shift in foods consumed, apparently from vegetable to animal, occurs during late fall to early spring. This change most likely is due to the scarcity of vegetable foods during this period.

Food habit determination was made by the analysis of 108 droppings, 11 stomachs, and the contents of 11 intestinal tracts. The six major food items based on occurrence were: (1) wild grapes, (2) shorthorned

\* A popular condensation of a M. Sc. thesis, V.P.I., Blacksburg, Va. Research conducted while the writer was a research fellow of the Virginia Cooperative Wildlife Research Unit: Virginia Commission of Game and Inland Fisheries, Wildlife Management Institute, Virginia Polytechnic Institute and the U. S. Fish and Wildlife Service, cooperating.



grasshopper, (3) huckleberry, (4) oak (acorn), (5) beetle and (6) blackberry. Due to the short growing season, and absence of abundant aquatic foods which are common in the Coastal Plains, food is more scarce over a longer period of time and more difficult to obtain by the raccoon in southwest Virginia than in the Coastal Plain, thereby making it more difficult for a dense raccoon population to maintain itself. If the raccoon populations in the mountain areas of southwest Virginia were as dense as those reported from the Tidewater, food probably would be at a premium during the critical late-winter, early-spring period. As a result, the population would possibly be limited from reaching its maximum productivity.

### Den Sites

In order to obtain a comparison of the number of den sites available to raccoon on three investigational areas, a den site survey was made on each area. An average of 1.05 den trees per acre was found while ground dens averaged 1.22 per acre. From the data collected it was apparent that denning sites are plentiful enough to accommodate a much larger population on all study areas than currently existed. Reports from reliable raccoon hunters indicate that den trees are still rather plentiful in most sections of the mountain regions of southwest Virginia. In some localized areas where timber management is not practiced den trees are rare.

### Tagging and Releasing Raccoons

During the course of this study a total of 101 raccoons was ear tagged and released in southwest Virginia mountains.

Two reports have been received of the taking by hunters of tagged raccoons. This gives two known distances which the raccoons traveled from the release point; the airline distance between the point of release and the point of capture was 21 miles for one raccoon



A young eastern raccoon up a tree on Mill Creek, shortly after being released in Giles County.

and 7½ miles for the other. In southwest Virginia, contrasting environment, radical changes in quantity and quality of foods, new water conditions, and lower mean temperatures possibly play a part in stocked raccoons adapting themselves in this region, although many think it ideal raccoon range.

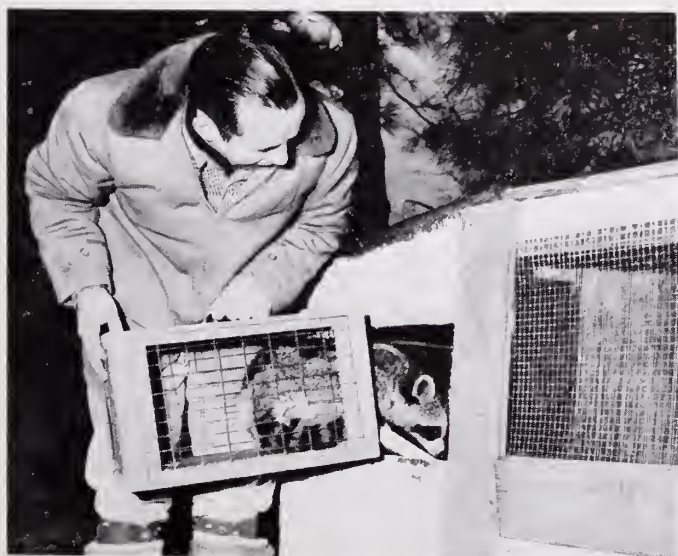
### General Life History

The average litter size based on five known litters of young was 4.4 young. The average weight of 12 raccoons taken during the hunting season (October 15, 1951-January 31, 1952) was 9.1 pounds, while the average weight of nine animals trapped in March 1952 was 6.9 pounds. A 27 pound male was the largest animal reported taken by the 341 hunters interviewed. A 16.3 pound male was the heaviest raccoon handled by the writer.

The low incident of parasitism of 9 live raccoons and 15 carcasses examined would indicate that parasites are not detrimental to the raccoon population in southwest Virginia.

During this study no evidence of disease was found in any of the raccoons handled. All indications point to the fact that raccoons are in excellent health in this section of the state.

With the exception of man and dog, in Virginia there are few animals with the ability to prey upon mature raccoon. Since the coon is normally nocturnal in habit, animals that hunt at night, such as the bobcat and owls, would most likely prey upon them. The list of animals found in the food of the raccoon gives some indication as to just what animals are being preyed upon by raccoon. These prey animals are: meadow mouse, white-footed mouse, cottontail rabbit, opossum, gray squirrel, common mole, chipmunk, leopard frog, crayfish, slate-



One of hundreds of coons trapped by sportsmen in the east for release west of Blue Ridge Mountains.

(Continued on page 21)



# The "Mystery" Bass of the Chickahominy

By A. K. HUTTON

EDITOR'S NOTE: January is not normally considered a fishing month, but since Mr. Hutton is apparently a deer enthusiast as well as a fisherman, we thought this unusual tale might interest some of our readers. We leave authenticity up to the author.

IN THE Chickahominy River section in southeast Virginia there has been for the past few years a persistent rumor of a new and strange species of fish being seen from time to time in the river and its tributarial creeks. While the reports varied somewhat, most of them were in general agreement in two respects, that the new species resembles very strongly the large-mouth black bass, but that it carries on its head a set of antlers much akin to those of the white-tailed deer.

Some of the country folk living nearby to the marshlands have persisted in the authenticity of these reports, even offering a plausible and to them, at least, a factual explanation of its origin, which runs somewhat like this.

There are a lot of deer and consequently a lot of deer hunters in the area and the usual method for hunting deer is to run them with deer hounds while the hunters take stands and wait for the dogs to run a deer by. The deer have found that when the hounds get hot on their trail, the safest and most sensible thing to do is to head for the water.

Legend has it that one big old buck was run into the water so often that finally he got tired of it and just spent practically all his time in the stream going ashore only occasionally for short periods to graze.

Gradually the fish in the area became more and more accustomed to the big fellow, and would swim near and around him in quite friendly fashion. He eventually took up with a big lady bass and they lived in the stream in connubial bliss. It is claimed that the progeny of this bizarre union have developed into this strain of strange antlered fish.



It has been reported that this new species is omnivorous and that some of them have been seen lying along the banks near the surface nibbling contentedly at the tender tops of marsh grasses where they drooped into the water, or that they may lie in wait among the branches of some old submerged tree, using their antlers as camouflage, and dart out and gobble up some hapless minnow as a *piece de resistance*.

With the recent taking of a large and beautifully antlered example of the new species, the aforementioned rumors must now be accepted as an actuality. After all, pictures can't lie, or can they? The accompanying photographic illustration shows the mounted head of this big fellow, which sports a nice six-point rack. He was taken on a casting rod with an under-water artificial minnow. After a good 10 minute battle he finally rolled over on his side and was lifted into the boat by his antlers. He weighed close to eight and a half pounds, but at least a pound of this weight is estimated to have been antlers.

Locally the fish has been called by several names including stag bass, horned bass, antlered bass, and even Rudolph chub. Inasmuch as the zoological name of the Virginia white-tailed deer is "*Odocoileus virginianus*," zoologists have suggested the name of "*Ichthus odocoileus*," or deer fish, for the new species. Being properly descriptive, this designation will probably be accepted.

What's that? You doubt the authenticity of this discourse?

Well, I'll have you understand, suh, that mah reputation for verity is unassailable and mah every utterance is known to be the very epitome of veracity!

WHY IS A FOREST LIKE A FISHBOWL? A fishbowl will hold only so many fish, and a forest only so many deer. The proof is in the forest itself. Where a telltale line marks the highest level a hungry deer can reach, there are too many deer in that forest.

Some hunters believe female deer should be protected from shooting so more fawns will be born. But when a fishbowl is already full, the extra fish die.

—Carnegie Museum

# What Is Snow?

By ARTHUR T. WILCOX

**S**NOW is a familiar substance. Sometimes too familiar. One's attitude toward it has much to do with determining how it looks. To the automobile driver who is stuck in it, snow is rather unpleasant and at its *worst*, provides extremely poor traction. To the skier, snow is very beautiful, and at its *best* provides extremely poor traction.

Considered entirely apart from the inconveniences or pleasures it causes, snow is a most interesting subject in its own right. It has many different forms and undergoes a variety of different changes as it lies upon the ground. There are nine recognized different types of snow classified according to wetness or dryness, age and the degree to which it has settled on the ground. It is interesting to note that the Eskimos, independently of the snow scientists, have nine different words meaning snow.

Snow consists of ice, thus falling snow always has somewhere in it the hexagonal crystal structure of ice. Sometimes snowflakes fail to show this structure because the original crystal has been thickly covered with tiny balls of ice. At other times slim needles of ice fall, usually at quite low temperatures. Six-sided plates and simple six-sided stars are sometimes seen. At other times these stars may have many beautiful and complicated branches. Careful studies of snowflakes have shown that no two are exactly alike.

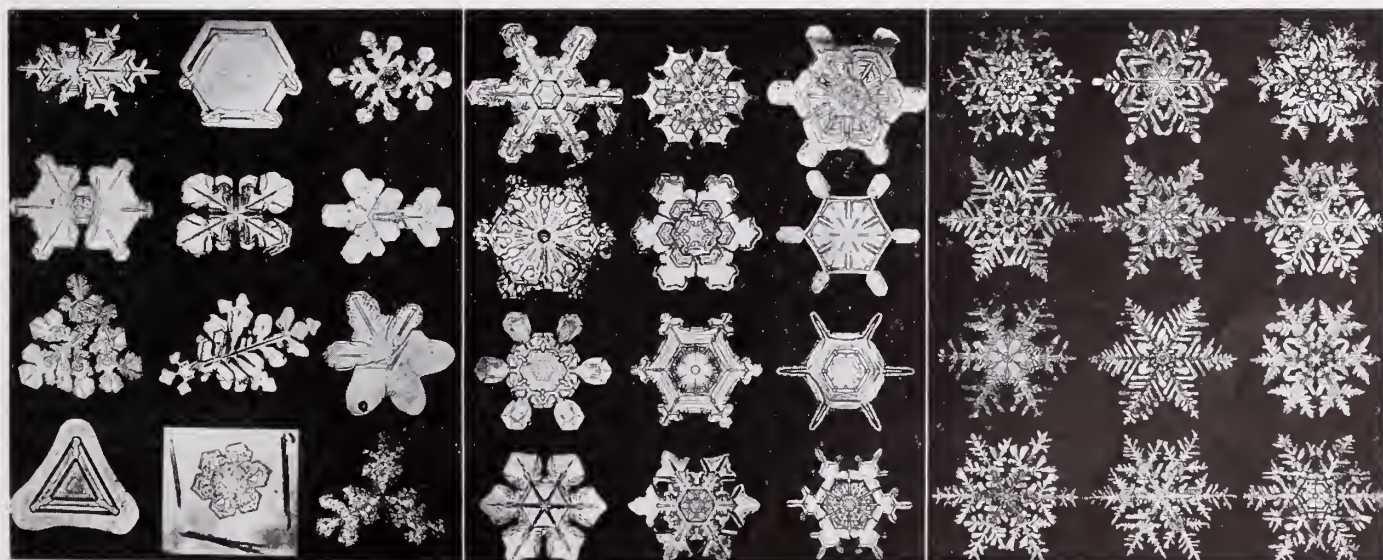
Snow, crystallized directly from vapor into solid form, may change in form while falling through the air or as

soon as it reaches the ground. As the flakes are blown about on the ground, the delicate points are broken and they settle more closely together. Newly fallen snow, not yet pressed down, is light and fluffy and has much air trapped in it. This in part accounts for the fact that men have been found alive after being buried under avalanches.

As snow lies on the ground, it settles and becomes more dense. If this process goes on long in an area of continuously cold climate, glaciers are formed. In Greenland such a great ice sheet covers most of that entire island. In the Arctic, snow tends to be very fine and dry. Strong winds often blow it about violently. In fact, a sizable drift may be blown into a house through a keyhole, and buildings must be designed with this in mind. The "pink snow" of the Arctic makes a newspaper story every winter. It is caused by millions of microscopic plants, so many in fact that the color of the snow may sometimes be reflected in the sky giving it a pink tinge.

The weight of the snow on the ground varies greatly. For this reason, it may be difficult to tell how much water will be formed from melting snow, although ten inches of snow is often equal to one inch of rain. Because melting snow releases water slowly, it has time to seep into the ground and may prevent many serious spring floods. Slowly melting snow returns valuable moisture to the soil. The same snow provides a protective blanket for many plants which would otherwise be killed by cold and winter's drying winds.

Samples of assorted shapes of snow crystals as photographed by W. A. Bentley of the U. S. Weather Bureau.



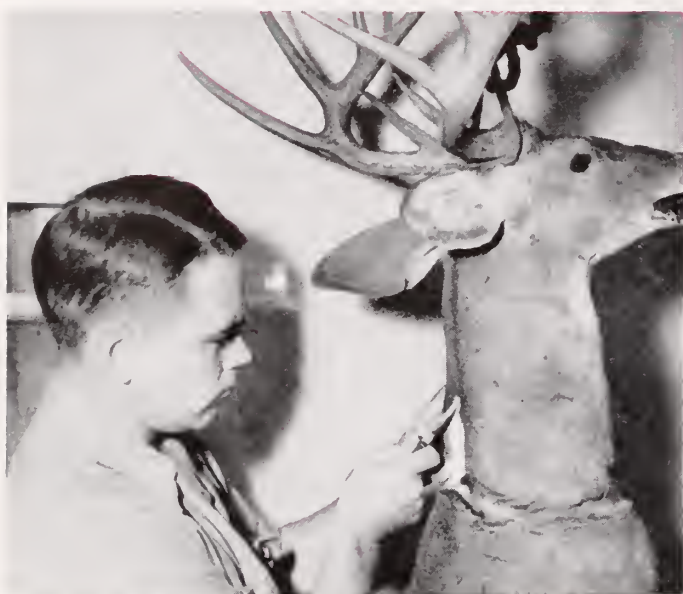


# How to Prepare a Deer Trophy for Mounting

(Photos by H. S. Mosby)



Cut off ears as close to skull as possible. The taxidermist will remove cartilage from ears and insert ear fillers.



Make an encircling cut around neck at shoulders and extend cut along top of neck to point three inches from antlers.



Skin carefully around eyes, mouth and nose. Be sure to leave all of the lips.



Extend cut from mid-point to base of each antler, leaving a "V" shaped scalp; cut around base of each antler.



Saw off portion of skull with antlers attached. Allow an ample piece of skull with which the taxidermist can work.

## CONSERVATION OFFICERS AND THE COURTS

(Continued from page 7)

In the final analysis, the conservation officer is faithful, fair and friendly, respectful, resourceful and reverent, with good ideas and ideals, noble in purpose, devoted to duty, sincere and sound in his contacts, helpful in his daily duties, independent in his thoughts, interdependent in his actions, then he will be praiseworthy, and the light he reflects will redound to himself, his associates and the cause of conservation and the protection of our wildlife resources, and then conservation will be on its way.

The law is a good thing. The immortal Abraham Lincoln once said: "Let reverence of the law be breathed by every mother to the lisping babe that prattles on her lap; let it be taught in schools, seminaries, colleges, let it be written in primers, spelling books, and almanacs; let it be preached from the pulpits and proclaimed in legislative halls, and enforced in courts of justice; let it become the political religion of the Nation."

*May I say to you, we must keep step, not mark time.  
The courts are our proving ground.*

## THE RACCOON IN SOUTHWEST VIRGINIA

(Continued from page 17)

colored junco, robin, and several unidentified birds and mammals.

### Management Practices

Here in Virginia, a unique situation exists that facilitates the stocking policy of the Game Commission. Brood stocks have been inadequate in many mountain counties in southwest Virginia, but in the Tidewater section, raccoons are too numerous. The Commission has set up a program to live trap animals in counties where there are coon damage complaints and transplant these animals in mountainous areas where they are in demand by coon hunters. This raccoon restocking program is carried on largely through cooperative efforts of interested hunters, their organizations, and the Commission. These coon hunters furnish part of the money to defray the cost of restocking, and the Commission pays the rest.

Raccoon restocking in some instances might re-seed an area, where the animal is rare, but if conditions are not favorable the coons will move out, or if they do stay they will generally not prosper or become abundant.



"I'll bet you had no idea it was so cold,  
Mr. Benson — You are Mr. Benson?"

Much of the information gathered on animals taken in the early part of the legal hunting season beginning October 15 points to the fact that in many instances family groups are still traveling together. Thus, a mature female and several young of the year often are captured in the same tree or in the immediate vicinity. Ideally more sport would be derived from an increased number of chases if the season were so regulated as to insure the dispersal of these family groups. Many hunters realize it is not smart conservation to wipe out these families and, in many instances, conscientious coon hunters will take only one animal, and leave the rest of the group for future chases.

**DAM THE RAIN.** A pond built by damming a gully or a natural valley probably helps the farmer in more ways than any other improvement he could make at so low a cost in time and money.

Ponds furnish water for fire protection, livestock watering, spraying. They harbor fish. They give ducks a place to nest and something to eat. They provide nurseries for fish, frogs, muskrats, mink, and insect-eating toads. And they give the folks on the farm a chance to go swimming, skating and boating.

—Carnegie Museum





### **Rewards For Capture of Rountree's Assailant**

Rewards totalling \$1,200 have been offered for information leading to the capture and conviction of the illegal squirrel hunter who on November 7 seriously wounded W. Shelton Rountree, game warden of Nansemond County. Of the reward money, \$500 was authorized in a proclamation by Governor Battle and the balance has come from contributions by the Board of Supervisors, sportsmen's clubs and individuals.

Rountree was hit in the arm by a shotgun blast fired at close range by the squirrel hunter whom he had come upon at the edge of the Dismal Swamp. Taken to the Louise Obici Memorial Hospital in Suffolk on the 7th, Rountree lost the fight to save his left arm which was amputated at the elbow on on November 17th.

Voicing the distress of the Commission at the news, Executive Director I. T. Quinn said: "Rountree is one of the most popular men on the staff and has endeared himself to the vast horde of hunters and fishermen in southeast Virginia by his fine constructive work as game warden in the section during the past eight years."

Webb Midyette, chief of the Commission's law enforcement division, commenting upon the shooting, stated: "While it is extremely regrettable that Warden Rountree was wounded, it is fortunate that Deputy Warden S. B. Snead was on hand to give immediate first aid to the wounded officer and to rush him to the hospital. There was no excuse for this shooting and state authorities will leave no stone unturned to bring the culprit to trial."

### **Bowers Takes West Virginia Editorship**

Robert R. Bowers, associate editor of **Virginia Wildlife** and chief of the publicity and publications section of the Education Division for the past two and a half years, has accepted editorship of the **West Virginia Conservation** magazine, official publication of the West Virginia Conservation Com-



Bob Bowers

mission, effective January 1. Bowers, 26-year-old native of West Virginia and forestry graduate of West Virginia University, joined the Virginia Commission in July 1951 after graduating from the University of Michigan with an M. S. degree in wildlife management.

While his valuable services will be missed greatly, we are happy about his advancement and the fact that the Virginia Commission is able to furnish West Virginia with an experienced and technically trained wildlife editor.

—Ed.

### **Public Fish Ponds Approved**

At a meeting of the Game Commission on October 23rd in Richmond, the development of a public fish pond in Brunswick County was approved, provided that the Commission could obtain a favorable

bid for the work. The Commission also approved the development of a public fish pond on Cunningham Creek in Fluvanna County provided a permit would be granted by the Transcontinental Gas Corporation to allow the inundation of pipe lines in a small section at one end of the pond. A representative of the company has recommended that a permit be issued.

These public fish pond developments constitute part of the program recently approved by Governor Battle in transferring funds from the unappropriated balances to the capital outlay fund of the Commission.

### **Increased Convictions For Game Law Violations**

The enforcement staff of the Game Commission obtained 366 more convictions for game and fish violations during July, August and September of 1953 than during the same period in 1952. The total number of game law convictions during the first quarter of the present fiscal year was 516 and fish law convictions amounted to 841, a combined total of 1357 convictions.

### **He Thought It Was A Warden**

Ike Vassar, supervising warden for Patrick Henry District, has submitted a report turned in to him by Game Warden D. A. Connor, of Appomattox County, involving 3 ex-convicts, 3 squirrels, 3 law enforcement men and a complete contempt for law enforcement personnel.

Warden Conner had received reports of illegal hunting in a de-



serted area between Appomattox and Evergreen. He checked this area for 12 straight days without finding the violator. Finally on Sunday, October 4, Conner entered the area accompanied by Deputy Sheriff Walter C. Conner and S. A. Conner, enforcement officer for the A. B. C. Board, and son of Warden Conner. They began circling the woods from which they had heard shots.

Without warning one of the violators jumped out of the brush and fired at Deputy Conner with a double barrelled shotgun at some 33 yards distance. Nine number 4 shot entered the neck and shoulder of the officer, wounding him painfully.

The companions of the Deputy carried the wounded man to Appomattox for medical attention and then set out to run down the one who had shot him. After several hours of searching, Warden Conner and S. A. Conner captured and arrested John Henry Fleshman, who admitted doing the shooting and violating the game laws. Fleshman was lodged in Appomattox County Jail and then the officers went after his accomplices, Tinsley Burns and Charles Scruggs.

The three alleged violators were tried in the court of Trial Justice Charles F. P. Crawley. Maximum penalties for each were meted out. Each was fined \$50.00 fine and costs and 30 days in jail for hunting on Sunday; \$50.00 fine and costs for hunting without a license; and in addition, in Circuit Court, Fleshman was given the maximum punishment for attempted murder, 10 years in the State Penitentiary. The net result was \$750.00 fines plus court costs, and a total of 10 years and 180 days in jail.

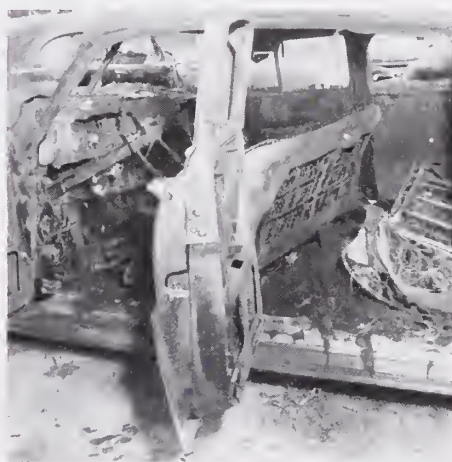
When asked why he shot the Deputy, Fleshman made the statement. "I thought he was a game warden."

### **Arson Suspected When Warden's Car Burns**

Last October a group of game wardens were patrolling a section

of Warwick on the lookout for deer spotlighters. After hearing a shot and watching a car move out of the same location, the wardens, Pat Garrow of Warwick, Richard Diggs of York County, and S. H. Mitchell of Hampton, all got into one car to give chase, leaving Warden Garrow's new car parked at the scene of the alleged violation.

A few minutes later the wardens noticed a glare of light on the horizon in the direction they had just left. Returning to the place where



Warden Garrow's new car after suspected arson.

they had left the car, they were shocked to find it burning furiously. Someone had thrown gasoline inside the warden's car and set fire to it. The car was completely gutted inside and out by the fire and all but worthless by the time it was put out.

It is impossible to say yet who committed this act, but it is strongly suspected that game violators in this vicinity set fire to the car to "get even" with the game warden.

### **Fisherman Lands Four Quail**

According to a report from Dr. Henry S. Mosby, Director of the Virginia Cooperative Wildlife Research Unit at Blacksburg, an unusual bit of luck came to fisherman James Smith of Blacksburg when he caught four of eight quail in his

landing net on Claytor Lake September 27. Smith was out fishing when he saw what looked like eight teal in the lake several hundred yards offshore. On closer examination he saw they were quail and managed to catch four in his landing net which he brought safely to shore where he released the birds.

### **Class In Deer Aging Techniques**

Before the opening of the general hunting season, Stuart P. Davey, leader of deer investigation work in Virginia, instructed a group of farm-game technicians in procedures and techniques used in aging deer so they could assist in gathering information for the better management of Virginia's deer herds. Weighing, sexing and aging deer reveal range conditions of various areas and herd composition.

All this season the technicians manned checking stations west of the Blue Ridge. Other technicians and district game biologists, personnel from V. P. I., and, in border counties, biologists from West Virginia Conservation Commission, also assisted in this work of gathering information at the big game checking stations.



"We're hunting mushrooms!"





## FIRST VIRGINIANS COMPLETE NRA HUNTER SAFETY COURSE

Sixty-seven individuals completed the National Rifle Association Safety Course last October 15-16, 1953, at West Point, under the instruction of John W. Courtney, Jr., NRA instructor.

The following persons, all teenagers but two, completed the hunting safety course: Jeannette Marie Ankrum, William Franklin Berry, John F. Berry, Barbara Jean Bew, Phyllis Ann Bew, James Colman Bohannon, Rose Ann Butcher, Franklin Delner Carlton, Charles Ervin Carter, Alice May Courtney, Christine Marie Czblewski, Rita C. Dixon, Anna Lee Dunn, Wilton T. Dunn, Geraldine Foster, John Musco Garnett, Jr., Robert Lee Glazebrook, Adam Frank Geron, Jr., Alice Jane Greene, Betty Carolyn Greene, James Dorsey Groome, Marcia Anne Hancock, Alice Lee Harris, Emma Louise Hatz, Frederick William Hodges, Lloyd Simms Hodges, Raymond Bray Houston, Gerald Ray Jackowski, Robert L. Jackson, Charles Edward Johnson, Dorothy Pemberton Johnson, Gustavus Elis Johnson, Bruce Willis Keffer, Jr., Patricia Ray Knapp, Karilene Ann Kruse, Helen Stella Lash, Barbara Ann Lawson, Walter Sammel Marshall, Patricia Mae Mathews, Mary Lynda McCray, Thomas Blakey McDonald, Jr., Burley McFarlane Medlin, Alice Jean Miller, Melvin Louis Moody, Manuel Lacy Norman, John Anthony O'Connell, William Earl O'Connor, William I. Putnam, Ernest Lee Rilee, Jr., Michael L. Rilee, William Hamilton Rilee, Jack P. Rose, Reginald Clay Rose, Virginia Ann Sniegon, James D. Snow, Thomas Doswell Soles, Jr., James Stanulis, Mary Elizabeth Steward, Joyce Ellen Turner, Barbara Jeanette Vosnick, Betty Ann Walton, Shirley L. Walton, Gerald J. Wil-

liams, Donald Stanulis, Nan Gordon Williams, Phyllis Lee Wood, Temple Robert Hooper.

Mr. Courtney reports that to his knowledge this is the first class of its kind completed in Virginia or the South. He recommends that legislative and educational departments give this course serious consideration as a prerequisite to cutting down on



"Must you always get up in the middle of the winter?"

hunting accidents. He believes a minimum age should be stipulated for hunting without adult supervision, perhaps 18 years of age.

For the course in safety shooting, a three hour lecture and examination was accepted in health and physical education classes by West Point High School. Principal H. A. Humphreys was most cooperative in the class, lending his help and assistance to Mr. Courtney's efforts in bringing hunting safety through safe shooting into the school.

## PUNKIN HOLLOW RECIPROCITY

Bow and arrow hunters bagged only one deer last year in Ste. Genevieve County, Missouri, but at least one alert farmer was happy to keep them trying.

Leo Basler urged hunters to give his farm in Punkin Hollow a try last season and at least 13 bow hunters criss-crossed his land during the open season. The only stipulation Basler made was that the hunters watch for fires. The hunters got to hunt and Basler got adequate fire protection in the dry autumn woods.

To cooperate further, 12 local farmers walked several miles one Sunday afternoon in a deer drive for five St. Louis couples trying their hand at bow hunting in Punkin Hollow. No deer. Also, no fires.

## WORM-HOOKED TROUT LESS LIKELY TO LIVE AFTER RELEASE

Michigan fisheries research men have come up with a bit of bad news for the angling fraternity that feels worm-fishing is the best way to go after trout, according to the National Wildlife Federation.

It is also good news for the fly-fishing clan, which will now have some actual experimental evidence to throw around in their eternal rivalry with the worm fishermen.

Fisheries workers report that hooks used in worm fishing cause significantly greater death and injury to trout after release than do the hooks used in fly fishing.

This was the conclusion of Drs. L. N. Allison and Davis S. Shetter, who conducted a series of experiments during the last three years on a number of northern lower peninsula streams and at the Hunt Creek fisheries experiment station in Michigan.

The two specialists, from the State Conservation Department's institute for fisheries research at Ann Arbor, presented their findings this fall in a technical paper before the annual meeting of the American Fisheries Society in Milwaukee.



In three experiments involving some 1,400 brook trout, fly hookings in each case caused death to less than 4 per cent of all hooked fish, while three similar worm-fishing tests showed an average of more than 37 per cent mortality.

Similar experiments on brown trout showed no deaths among 69 fly-hooked fish while about 20 per cent of a nearly equal number of browns taken on worms died a short time later. With rainbows, the case was about the same: 11 per cent of fly-hooked fish died as against 35 per cent of those taken on worms.

Trout flies generally contain a tiny No. 12 and 14 hooks, while worm fishermen generally use the larger No. 2, 4, 6 and 8 hooks.

"The mortality from worm-hooking," states a report of the experiments, "could be a factor in keeping trout populations at minimal levels."

#### VIRGINIAN WINS NATIONAL CONSERVATION AWARD

Thomas V. Downing, assistant state supervisor of agricultural education, in charge of forestry, State Department of Education, Richmond, Virginia, was named winner of one of the American Forestry Association's five Conservation Awards of 1953. Mr. Downing received the award for his distinguished work in forestry education.

The awards, in annual recognition of outstanding service in the various fields related to the conservation of the nation's renewable natural resources, were presented as a highlight of the Association's Fourth American Forest Congress in Washington.

In honoring Mr. Downing, the Association cited the profound impact his work had in educating the youth of the South to the importance of proper resources management. Elected "Man of the Year" in Virginia in 1952, he created the state's forestry training camps and has pushed relentlessly for reforestation work throughout the state. Under Mr. Downing's leadership, vocational agriculture classes and individuals have planted upwards of six million tree

seedlings since 1950.

"No man in Virginia has reached more young people with sound forestry precepts than has Mr. Downing," commented Robert N. Hoskins, chairman of the Awards Committee and forester for the Seaboard Air Line Railroad. "Moreover, his influence is being felt throughout the whole South."



Alfred Coby and 8-point buck he killed with bow and arrow.

#### BIG BUCK FELLED BY "LITTLE STICK"

One of the 1,196 deer killed in Shenandoah County during the 1952-53 season was brought down by Alfred B. Coby of Maurertown, Virginia, with his bow and arrow. At the request of *Virginia Wildlife*, Mr. Coby has sent us an account of the unusual kill:

"On the second day of the regular six-day deer season last year, my wife and I crossed the mountain from the Shenandoah Valley into the Cedar Creek Valley. About half way down the other side of the mountain, we ran into a terrible fog which was about 5:30 A.M. We had to drive between five and ten miles per hour until we reached the middle of Cedar Creek Valley.

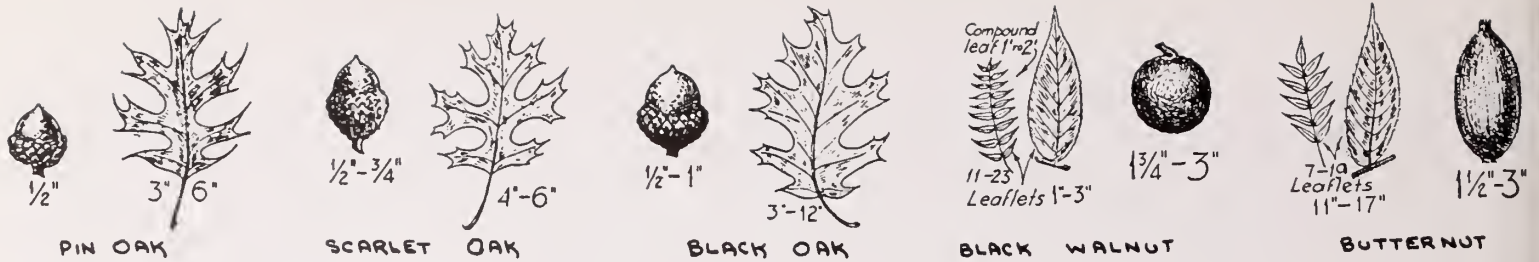
"It was not yet daylight and still terribly foggy. We sat in our panel truck and dozed off. About eight we woke

up, opened our thermos bottle and, after drinking a cup of hot coffee, started to deer hunt. I sent my wife up one ridge and I started up the other ridge. She was hunting with a Remington Model 721, 270 caliber. About a half hour later I heard a rifle crack from the direction in which she had gone, so I started after her and about 1,000 yards beyond found her standing beside a beautiful 8-point buck that weighed 180 pounds. It was the first deer she had killed or shot at. I was much surprised to find her very calm, not excited at all, but naturally very much pleased with her buck.

"We had a man bring the deer off the ridge to our truck and by the time we had had something to eat, it was about 1:00 P.M. I was being razzed about carrying "the old stick" which I call my bow and arrows, so we decided to drive up an old road where we found an opening through which an electric light line was run. There was a little cleared spot that looked good to me. We stopped the truck and I decided to walk up to the power line while my wife took a nap. I had gone just about 300 yards and stopped beside a pine tree when I saw a buck running down a little hollow about 200 yards from me. When he reached the bottom of the hollow I was unable to see him. However, I suspected he would either turn up or down the hollow or follow the power line. So I was ready. When he reached the top of the little hollow, I let the arrow go, striking him at the bottom of the neck. He stopped instantly and looked me right in the eye. By that time another arrow was on the way and struck about three inches from the first one. The deer staggered off to the side and fell against a little pine tree. When I reached him, about 80 paces away, he was stone dead. My wife and I were both very well pleased with our day's hunt and there was no more razzing for the "little stick" that I carried.

"One lady came out and looked at the deer and remarked: 'How did you ever get close enough to a deer to punch them sticks in him?'





# MAST

By ROBERTS MANN and DAVID H. THOMPSON

**M**AST, according to Webster, was an Anglo-Saxon word for the nuts, especially beechnuts, which littered the forest floor and served as food for hogs, deer and grouse. *In addition to nuts and acorns, the term is often extended to include the winged seeds of such trees as maple, elm and ash, and even the nuts or seeds of pines—all eaten by wildlife.*

Acorns, rich in starch, fat and vitamins, are now most widely available and most commonly eaten. The oily beechnuts on the uplands and the pecans in the bottom lands are also important but much less so than in pioneer days. Until about 50 years ago, chestnuts—now destroyed by blight from Asia—were of major importance in eastern United States. Hickory nuts, hazelnuts, walnuts and butternuts, because of their thick hard shells, are eaten principally by squirrels, chipmunks and their kin. In addition to mast, the fruits and berries of gum, cherry, persimmon, hawthorn, crabapple and other trees furnish much food for wildlife; and many shrubs and vines such as wild grape, blueberry and blackberry.

When the white man first came to America he found one of the greatest forests that ever existed. As the fur traders and explorers penetrated westward, they discovered that it extended in an almost unbroken stand from the Atlantic to the Mississippi except for occasional openings and the prairies of Illinois which extended eastward into central Indiana. The central portion, although there were mixed stands of pines and hemlocks in certain regions, was timbered chiefly with oak, chestnut, yellow poplar, maple, hickory, beech and other hardwoods. Stretching on and on in silent grandeur, this was the greatest and finest hardwood belt that ever stood. The rich bottomlands were covered with sycamore, walnut and butternut, elm, ash, gum, soft maple, cottonwood and willow—many of them of enor-

mous size. West of the Mississippi, the hardwood forests covered eastern Iowa and extended southwest through Missouri and Arkansas to eastern Oklahoma and Texas. It was a paradise for wildlife and the Indian who took only what he needed for food and clothing.

The billions of wild pigeons fed on mast. One flock, which roosted in Kentucky and fed in the beech forests of Indiana, was estimated to number more than two billion birds. Feeding on the ground, a flock would extend over a wide front in a series of ranks, with one rear rank and then another continually rising in the air and dropping down ahead so that, as the flock surged rapidly forward with a rolling motion, the ground was swept bare of pigeon food. The range of the wild turkeys, that once were distributed over the eastern half of the United States, was determined by the availability of mast for winter food. Bear, deer, raccoon, foxes, and other animals besides the squirrels, fed on mast. The cougar, bobcat and wolf preyed on animals that grew fat on mast. Wood duck, grouse, many songbirds, and now pheasant, depend considerably on mast in autumn and early winter.

The pioneer settlers were equally dependent on mast as food for their hogs and cattle, as well as for some of their own food. The little clearings where they planted corn, flax, wheat, sorghum and vegetables between the deadened trees and stumps, were surrounded with rail fences to keep the animals out. In Indiana, for instance, laws requiring that livestock be fenced in were not enacted until long after the Civil War. Hogs grew fat on acorns, beechnuts and chestnuts. Large droves were commonly rounded up in autumn and slowly driven long distances to market, feeding on mast as they went.

Then people got fat on hog meat.







Stuart P. Dovey, Commission's deer studies leader, briefs contestants and audience on the Commission's deer management program and on contest workings.



Shown after accepting awards for west of Blue Ridge hunters who could not be present are (L. to R.) Raymond Corr, John George, Royal Kinchloe, and Bloke Corr. Deer mounts in background are winning trophies.

## BIG GAME TROPHY CONTEST

*West of the Blue Ridge hunters ran away with a first in every class but one during the statewide Big Game Contest held last November 3 at Newport News.*

*First prize for the best deer trophy in the 10-point and above class went to F. B. Fridley at Augusta Springs for his 16-pointer killed in Augusta County.*

*In the six to nine point class, Mrs. Kannie Bear of Fulha Run Fork took first with a 9-pointer she killed in Rockingham County.*

*A. S. Walton of Newport News took first place in the 5-points and below class with a buck killed in Norfolk County.*

*In the bear trophy contest a bear killed by Billy Carroll of Waynesboro was awarded first. He killed the big bruin on the Augusta-Nelson County line.*

(Commission photos by Kesteloo)

Eight-year-old Edward Mogilley, from Newport News, tests the sharpness of a bear trophy's teeth during contest.



Arlon Jackson received a silver bowl for his fifth place winner in the deer trophy contest and also the coveted Barclay Memorial Trophy awarded by the Virginia Peninsula Sportsmen's Association.



The trophies awarded by the Game Commission to winners of the statewide deer and bear trophy contest held at Newport News.



# *Has Your School Entered?*

## 7<sup>th</sup> ANNUAL WILDLIFE Essay Contest

**SCHOOLS ELIGIBLE:** Only Virginia schools, elementary and high, grades 5-12 inclusive will be eligible to enter this contest.

**SUBJECT:** Wildlife Conservation: Its Meaning  
and Importance

### PRIZES

Eight grand prizes, \$50 each,  
one for each grade, totaling ....\$400

Eight second prizes, \$25 each,  
one for each grade, totaling ....\$200

Eight third prizes, \$15 each,  
one for each grade, totaling ....\$120

Sixteen honorable mention  
prizes, \$10 each, two for  
each grade, totaling .....\$160

Sixteen special mention prizes,  
\$5 each, two for each grade,  
totaling .....\$80

One school prize, best  
response .....\$40

**Grand total.....\$1000**

There will be seven prizes in each of the eight competing grades. Grand prize winners will come to Richmond as guests of the sponsors to receive their awards. Others will be given awards in the schools. The school having the best response will be given a special \$10 prize for its athletic or general purpose fund. 200 certificates of merit will be awarded in addition to the money grand prizes.

**\$1000000**  
**in PRIZES**

***Ends February 15, 1954***

**SPONSORED BY:** The Virginia Division of the Izaak  
Walton League of America and the Virginia Commis-  
sion of Game and Inland Fisheries.

### CONTEST RULES

1. Essays must be submitted through the schools participating and each essay must contain a minimum of 500 words.
2. Each entry should bear the following information in the upper right hand corner of each essay: name, sex, age, grade, address, school, county, and teacher.
3. Students of Virginia schools, grades 5-12 inclusive, will be eligible to enter this contest.
4. ALL essays MUST be mailed first class, PREPAID to COMMISSION OF GAME & INLAND FISHERIES, Box 1642, Richmond, Virginia. Teachers must submit ALL entries, however they may make their selection of the best essays and indicate their choices.
5. No papers will be returned and the decision of the judges will be final. Each sponsoring organization will appoint two conservationists to serve on the judging committee.